INTRODUCTION
Although the practice of chiropractic is one with a neuromusculoskeletal focus, a number of benign conditions appear to respond to chiropractic treatment methods. As a result, some patients seek chiropractic treatment as a non-invasive, non-drug therapeutic intervention. Premenstrual syndrome and dysmenorrhea are but two conditions that seem to respond to chiropractic manipulative therapy.

PREMENSTRUAL SYNDROME (PMS)
PMS is defined as a wide range of physical and psychological symptoms women may experience usually seven to fourteen days before menstruation. The symptoms may include fatigue, headache, water retention (bloating), breast tenderness, irritability, depression, tension, anxiety, and mood swings.

Estimates suggest that up to ninety percent of women of child-bearing age experience symptoms of PMS at some time in their lives. In some women, symptoms are so severe that work and social relationships are seriously disrupted.

In a study by Whittler(1), eleven women with histories of PMS symptoms that had occurred regularly for more than four months were evaluated and treated by an experienced chiropractor. The treatment extended through four menstrual cycles and consisted of spinal manipulations that were provided 5-7 times per month. The areas of the spine most often treated were the cervical spine and sacro-iliac joints. Participants were given questionnaires at the beginning and end of the study period to evaluate changes in their symptoms. The questionnaires evaluated changes in ten categories of symptoms including irritability and mood swings, tension, ineffectiveness, lack of motor coordination, mental/cognitive functioning, eating habits, variations in sexual drive and activity, overall physical symptoms, and social impairment.

The subjects reported improvement in all ten categories with the greatest improvement of symptoms relating to variations in sexual drive (70.7%), social impairment (64.5%), and mood swings (60.8%). The overall average improvement in all symptom categories was 44.2 percent.

Whittler's(1) study demonstrates that chiropractic manipulation may represent an effective adjunct or alternative to traditional medical care which often includes the use of diuretic drugs and/or birth control pills, which many women are unable to take.

In a case report by Stude(2), he describes the criteria for the accurate diagnosis of PMS and a device known as the PMT-Cator for converting a patient's subjective symptomatology into an objective menstrual cycle interval score. According to Stude(2), using the PMT-Cator device, a 10 or more point differential between postmenstrual and premenstrual totals is suggestive of PMS.
Stude(2) goes on to describe the history of a patient with a baseline PMT-Cator score of 62 (3 month average of 73, 54, and 59) and how her menstrual cycle interval score dropped to an average of 5.67 (3 month average of 0, 9, and 8) with chiropractic treatment.

Stude concludes that although this case study design does not rule out the placebo effect, the, "... patient did report pursuing other medical treatment alternatives in the past, without subjective improvement."(2)

In yet another case report, Hubbs(3) presents a case of a 28-year-old female with a chronic history of low back pain and symptoms of premenstrual syndrome consisting of intermittent cramping for 24 hours prior and during early menstrual flow, depression, bloating, agitation, and nervous eating. Spinal manipulations applied to the L1 area resulted in the patient reporting a significantly diminished pre- and peri-menstruation cramping time (approximately 30 minutes versus 24 hours) and the ease of other PMS symptomatology. The patient's lumbar spine pain also remissed.

Hubbs(3) goes on to postulate that reflex sympathetic vasoconstriction to the uterine smooth muscle may result in diminished amounts of ovarian hormones reaching the uterus during menstruation causing the patient's cramping and other associated symptoms. Normalization of sympathetic outflow through chiropractic adjustment of the upper lumbar spine might have accounted for the patient's symptom improvement.

DYSMENORRHEA
In 1990, Liebl(4) presented the findings of a time series, single case control study of a patient with chronic dysmenorrhea. The patient monitored her monthly menstrual cramps by using pain diaries during 4 months of a baseline phase and over a three month period of chiropractic treatment.

The patient received 19 treatment sessions over the two month treatment period-approximately twice per week for the first two months and once per week over the last month. Liebl states, "... pain was rated four times daily, allowing for the possibility of 0 to 4 episodes of pain. The months during the treatment phase realized fewer episodes of pain as well as lower pain ratings. Pain was never rated above 2 in the treatment phase whereas the months of baseline all had some ratings of 3 or above. The average number of recordings showing pain in the baseline phase was 8 per month compared to an average of 2.25 episodes of pain per month in the treatment phase."(4)

In yet another study(5), forty-five women with a history of primary dysmenorrhea were randomly assigned to groups receiving either side posture manipulative procedures (n=24) or a sham side posture manipulation (n=21).

Back pain and abdominal pain were assessed using visual analog scales and menstrual symptoms were assessed via questionnaire administered 15 minutes prior to, and 60 minutes following treatment interventions. Blood samples were collected at those same times and tested for plasma levels of prostaglandins.

Both groups reported significant improvement in menstrual distress symptoms and decrease in back and abdominal pain, however, the effect was approximately twice as great in the group receiving the true spinal manual therapy. These effects were associated with significant decreases in post-manipulative plasma levels for both groups.

The authors propose that their pilot findings, "... suggest that spinal manipulative therapy may be an effective and safe nonpharmacological alternative for relieving pain and distress of primary dysmenorrhea, at least for a short period of time after treatment. The data presented here support the anecdotal claims of women that SMT (spinal manipulative therapy) reduces the pain and symptoms associated with menstruation."(5)
Finally, chiropractors are not the only members of the health care sciences to describe the positive effects of spinal manipulation on dysmenorrhea. While describing his experimental results with spinal manual therapy in women with dysmenorrhea, Lewit (a medical neurologist) states, "In another group of 70 women with menstrual pain and negative gynaecological findings, treatment of the spine mainly by manipulation gave excellent results in 43 cases, favourable in 13, and no change in 14... From these data we may conclude that... Menstruation pain with otherwise normal gynaecological findings, especially when localized in the low back, is usually of vertebrogenic origin and often the first clinical manifestation of disturbance in the lumbosacral region."(6)

CONCLUSION
As described in an earlier edition of this newsletter series, chiropractors do not "treat" organic disease (Type O Disorders). This would therefore be an excellent time to restate the findings of the Royal Commission of Inquiry into Chiropractic's findings. The Royal Commission of Inquiry Into Chiropractic was an eighteen month government commissioned study investigating the profession of chiropractic in New Zealand, Australia, the United States and Europe. In regards to the treatment of organic disorders, The Royal Commission of Inquiry stated, "The chiropractor does not set out to cure or relieve a particular ailment. What he sets out to do is to ensure that the spinal column is functioning normally. If a particular ailment clears up or is relieved following therapy, so much the better. If it does not, then at least the patient, now with no spinal impediment to the working of his nervous system, ought to be in a generally better condition and better able to cope with the ailment."(7)

In other words, the findings reported above in the subjects with PMS and dysmenorrhea are merely side effects of spinal manipulative therapy-they just happen to be pleasant side effects for the women with spinal dysfunction and concurrent PMS and dysmenorrhea.

As the Royal Commission of Inquiry found, Chiropractic is a profession whose aim is the improvement of the function of the nervous system by improving the structure of the "living conduit" in which part of that nervous system is housed. Because chiropractors apply mechanical forces directly to that living conduit (the spinal column), this is presumably the reason why those clinical entities that are primarily musculoskeletal in nature respond most readily to the treatments chiropractors apply to their patients' spines. This makes chiropractic a limited specialty much like the practices of optometry, podiatry, and dentistry. Unlike optometry, podiatry, and dentistry, chiropractic is a limited specialty with documented full body ramifications.

REFERENCES